

Datasheet for ABIN3095020  
RIPK1 Protein (AA 1-671) (Strep Tag)



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Overview

Quantity:	1 mg
Target:	RIPK1
Protein Characteristics:	AA 1-671
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This RIPK1 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Sequence:	<p>MQPDMSLNVI KMKSSDFLES AELDSGGFGK VSLCFHRTQG LMIMKTVYKG PNCIEHNEAL LEEAKMMNRL RHSRVVKLLG VIIEEGKYSL VMEYMEKGNL MHVLKAEMST PLSVKGRIL EIIEGMCYLH GKGVIHKDLK PENILVDNDF HIKIADLGLA SFKMWSKLNN EEHNELREVD GTAKKNGGTL YYMAPEHLND VNAKPTEKSD VYSFAVVLWA IFANKEPYEN AICEQQLIMC IKSGNRPDVD DITEYCPREI ISLMKLCWEA NPEARPTFPG IEEKFRPFYL SQLEESVEED VKSLKKEYSN ENAVVKRMQS LQLDCVAVPS SRSNSATEQP GSLHSSQGLG MGPVEESWFA PSLEHPQEEN EPSLQSKLQD EANYHLYGSR MDRQTKQQR QNVAYNREEE RRRRVSHDPF AQQRPYENFQ NTEGKGTAYS SAASHGNAVH QPSGLTSQPQ VLYQNNGLYS SHGFGTRPLD PGTAGPRVWY RPIPSHMPSL HNIPVPETNY LGNTPTMPFS SLPPTDESIK YTIYNSTGIQ IGAYNYMEIG GTSSSLLDST NTNFKEEPAA KYQAIFDNTT SLTDKHLDP RENLGKHWKN CARKLGFTQS QIDEIDHDYE RDGLKEKVYQ MLQKWVMREG IKGATVGKLA QALHQCSRID LLSSLIYVSQ N</p>
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**Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

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### Characteristics:

#### Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

#### Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

#### Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.
- We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

### Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

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Product Details

- 1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.
- 2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	RIPK1
Alternative Name:	RIPK1 ( <a href="#">RIPK1 Products</a> )
Background:	<p>Receptor-interacting serine/threonine-protein kinase 1 (EC 2.7.11.1) (Cell death protein RIP) (Receptor-interacting protein 1) (RIP-1),FUNCTION: Serine-threonine kinase which is a key regulator of TNF-mediated apoptosis, necroptosis and inflammatory pathways (PubMed:32657447, PubMed:31827280, PubMed:31827281, PubMed:17703191, PubMed:24144979). Exhibits kinase activity-dependent functions that regulate cell death and kinase-independent scaffold functions regulating inflammatory signaling and cell survival (PubMed:11101870, PubMed:19524512, PubMed:19524513, PubMed:29440439, PubMed:30988283). Has kinase-independent scaffold functions: upon binding of TNF to TNFR1, RIPK1 is recruited to the TNF-R1 signaling complex (TNF-RSC also known as complex I) where it acts as a scaffold protein promoting cell survival, in part, by activating the canonical NF-kappa-B pathway (By similarity). Kinase activity is essential to regulate necroptosis and apoptosis, two parallel forms of cell death: upon activation of its protein kinase activity, regulates assembly of two death-inducing complexes, namely complex IIa (RIPK1-FADD-CASP8), which drives apoptosis, and the complex IIb (RIPK1-RIPK3-MLKL), which drives necroptosis (By similarity). RIPK1 is required to limit CASP8-dependent TNFR1-induced apoptosis (By similarity). In normal conditions, RIPK1 acts as an inhibitor of RIPK3-dependent necroptosis, a process mediated by RIPK3 component of complex IIb, which catalyzes phosphorylation of MLKL upon induction by ZBP1 (PubMed:19524512, PubMed:19524513, PubMed:29440439, PubMed:30988283). Inhibits RIPK3-mediated necroptosis via FADD-mediated recruitment of CASP8, which cleaves RIPK1 and limits TNF-induced necroptosis (PubMed:19524512, PubMed:19524513, PubMed:29440439, PubMed:30988283). Required to inhibit apoptosis and necroptosis during embryonic development: acts by preventing the</p>

## Target Details

interaction of TRADD with FADD thereby limiting aberrant activation of CASP8 (By similarity). In addition to apoptosis and necroptosis, also involved in inflammatory response by promoting transcriptional production of pro-inflammatory cytokines, such as interleukin-6 (IL6) (PubMed:31827280, PubMed:31827281). Phosphorylates RIPK3: RIPK1 and RIPK3 undergo reciprocal auto- and trans-phosphorylation (PubMed:19524513). Phosphorylates DAB2IP at 'Ser-728' in a TNF-alpha-dependent manner, and thereby activates the MAP3K5-JNK apoptotic cascade (PubMed:17389591, PubMed:15310755). Required for ZBP1-induced NF-kappa-B activation in response to DNA damage (By similarity). {ECO:0000250|UniProtKB:Q60855, ECO:0000269|PubMed:11101870, ECO:0000269|PubMed:15310755, ECO:0000269|PubMed:17389591, ECO:0000269|PubMed:17703191, ECO:0000269|PubMed:19524512, ECO:0000269|PubMed:19524513, ECO:0000269|PubMed:24144979, ECO:0000269|PubMed:29440439, ECO:0000269|PubMed:30988283, ECO:0000269|PubMed:31827280, ECO:0000269|PubMed:31827281, ECO:0000269|PubMed:32657447}.

Molecular Weight: 75.9 kDa

UniProt: [Q13546](#)

Pathways: [NF-kappaB Signaling](#), [Apoptosis](#), [Caspase Cascade in Apoptosis](#), [TLR Signaling](#), [Activation of Innate immune Response](#), [Inositol Metabolic Process](#), [Positive Regulation of Endopeptidase Activity](#), [Hepatitis C](#), [Protein targeting to Nucleus](#), [Toll-Like Receptors Cascades](#), [Negative Regulation of intrinsic apoptotic Signaling](#), [SARS-CoV-2 Protein Interactome](#), [Ubiquitin Proteasome Pathway](#)

## Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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## Application Details

something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Restrictions: For Research Use only

## Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

## Images



**Image 1.** „Crystallography Grade“ protein due to multi-step, protein-specific purification process